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Arizona's Timber Production and Mill Residue, 1984

William H. McLain



THE AUTHOR

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ACKNOWLEDGMENTS

We appreciate the cooperation of the owners and operators of Arizona's primary wood-using industries in supplying data for this report. We also thank the Forestry Division, Arizona State Land Department, and the staffs of the many Districts and National Forests in Arizona and the Southwestern Region, Forest Service, U.S. Department of Agriculture, for supplying us with information and referrals.

RESEARCH SUMMARY

Arizona's timber production in 1984 was 63.6 million cubic feet, down 19 percent from 1974. Sawlog production was 56.3 million cubic feet and pulpwood production 7.1 million cubic feet. The mill residue volume was estimated at 49.9 million cubic feet. The volume of residue used was 47.8 million cubic feet.

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INTRODUCTION

This bulletin reports the estimated timber production and mill residue of Arizona in 1984, coinciding with the year of forest inventory.

The data for this report (see tables 1 through 20) were obtained by canvassing primary wood processing plants in 1985. These plants, sawmills, and yards were identified from the "Directory of Arizona Wood Manufacturers, 1980," updated by the Forestry Division, Arizona State Land Department. In addition to canvassing the resident mills, those firms outside Arizona, but which were consuming roundwood that originated within the State, were also contacted. In both cases, mill operators were asked to supply information about the roundwood material used by them during 1984. This information included ownership and county of origin of roundwood consumed, species, type of product, and an estimate of residue produced by type. Appendix I includes conversion factors used in this report, and appendix II is a list of the participating primary wood processors.

TIMBER PRODUCTION

In 1984, Arizona's timber production, excluding fuelwood, was 63.6 million cubic feet, down 19 percent from 1974's 79 million cubic feet, which included fuelwood (fig. 1). Sawlogs continued to be the predominant product (table 1), accounting for 89 percent (56.3 million cubic feet) of the volume of all industrial roundwood harvested and matching the 1974 sawlog production (fig. 2). Pulpwood volume (7.1 million cubic feet) decreased about 10 percent from that of 1974. The reported post and pole production was 185,000 cubic feet, down substantially from 1974's 13.9 million cubic feet (the 1974 estimate included fuelwood; the 1984 estimate does not). There was no reported mine timber or house log harvest in Arizona in 1984. Of the reported timber products, 92 percent went to mills with annual production capacities exceeding 10 million board feet, lumber tally (table 20). Ponderosa pine (*Pinus ponderosa*) (57.6 million cubic feet) made up 91 percent of the harvest (table 1). Live tress provided 97 percent (61.5 million cubic feet) of the timber production. Growing-stock removals due to harvest were 67.98 million cubic feet. Sawtimber removals were 379.5 million board feet, Scribner rule.

Apache County produced 45 percent (28.7 million cubic feet) of Arizona's timber harvest in 1984 (table 7), Coconino County produced 39 percent (25 million cubic feet), and Navajo County produced 14 percent (8.6 million cubic feet) (fig. 3). Sawlog production increased in Apache and Coconino Counties and decreased in Navajo County compared to past years (fig. 4).

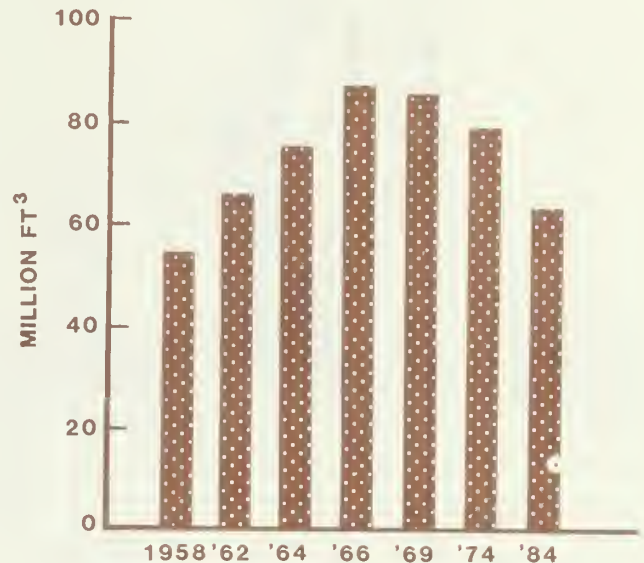


Figure 1—Arizona's timber production by selected years (Setzer and Throssell 1977; Setzer 1971). The 1984 estimate does not include fuelwood; estimates from the other years do.

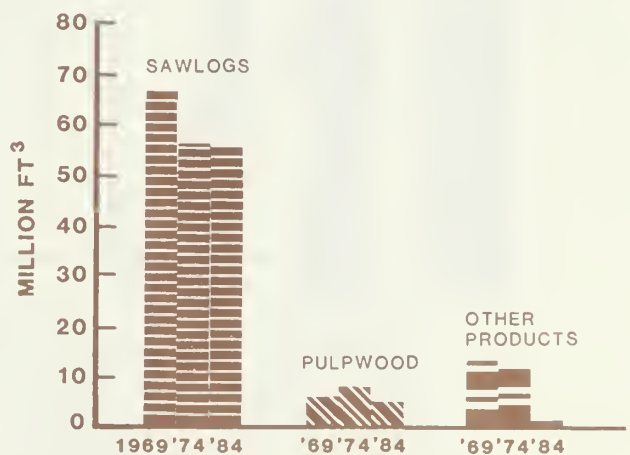


Figure 2—Arizona's timber production by product for selected years (Setzer and Throssell 1977; Setzer 1971). The "other products" category includes utility poles, corral poles, and posts. The 1969 and 1974 estimates in this category also include fuelwood, mine timbers, and excelsior bolts. House logs were included in the 1969 estimate. There were no reported harvests of house logs in 1974 and 1984 and no mine timber or excelsior reported for 1984. Estimates of fuelwood harvest for 1969 and 1974, thought to be small, cannot be found except as combined with other products. The fuelwood harvest estimate for 1984, a significant volume, is treated in a separate publication.

ARIZONA

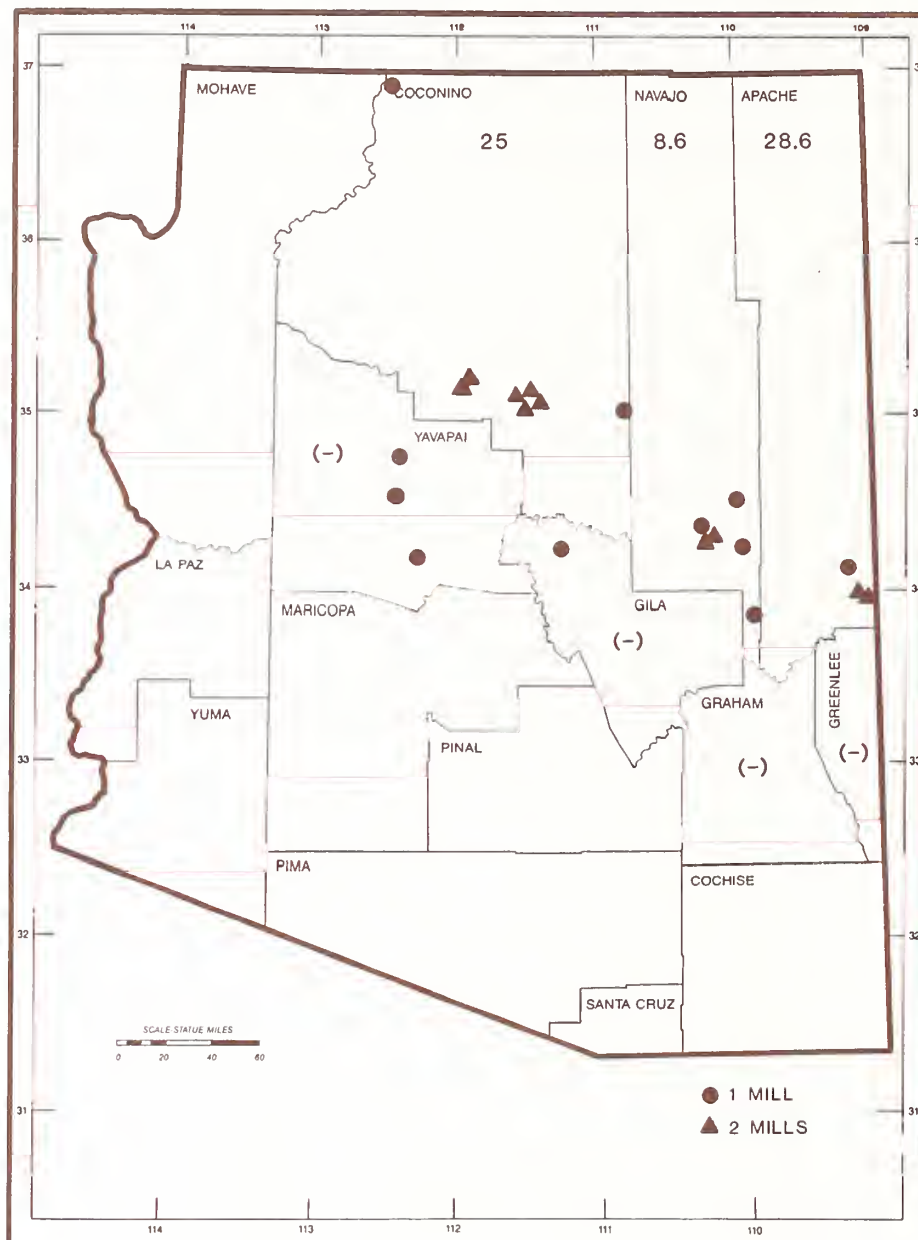


Figure 3—Timber production by county in millions of cubic feet and locations of primary wood processors in Arizona, 1984 (from mill canvas respondents). Key: ● = mill; ▲ = 2 mills; (-) = less than 1 million cubic feet.

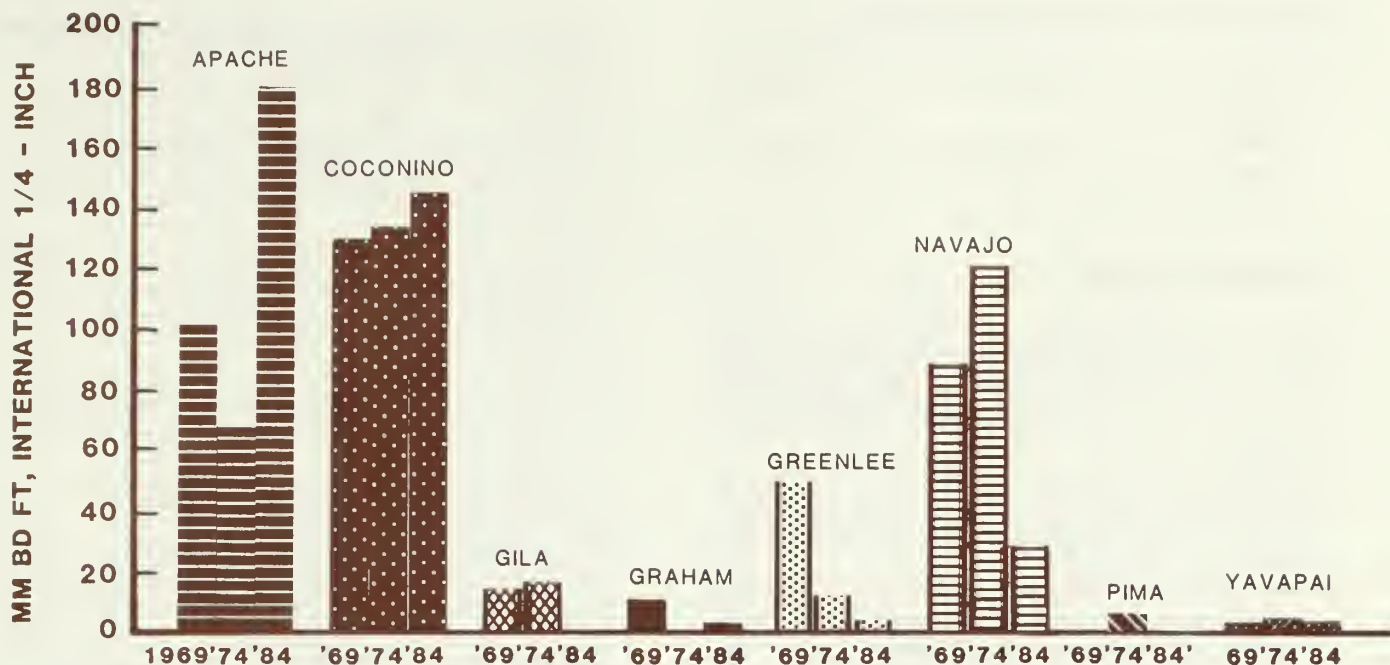


Figure 4—A comparison of mill receipts of sawlogs from Arizona timberlands by county of origin for a selected 3 years.

National Forest lands accounted for 66 percent of the timber products harvested in 1984 (table 10), compared to 59 percent in 1974 and 75 percent in 1966 (Setzer and Throssell 1977).

MILL RESIDUE

The estimated sawlog harvest for 1984 equaled that of 1974, yet the 1984 estimate of mill residue volume, 49.9 million cubic feet (table 19), is 47 percent more than that reported for 1974 (fig. 5). Mill residue estimates are a mixture of volumes reported directly by the mills, in varying units of measure, plus those derived by applying factors to reported log volume receipts (see appendix I, "Conversion Factors"). Additional information relative to the proportions of residue used as products shows that 96 percent of the mill residue produced in Arizona in 1984 was sold, used, or given away as pulp chips, hogged fuel, industrial fuel, or livestock bedding; landscaping, fencing, or gardening material; mulch or firewood (table 19). Most of the mill residue was used: 97 percent of bark, 96 percent of coarse residue, and 95 percent of fine residue.

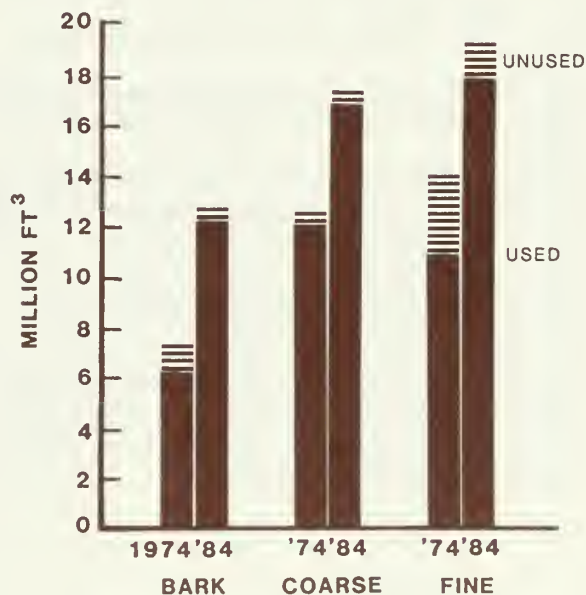


Figure 5—A comparison of used and unused residue from mills in Arizona, 1974 and 1984, in million cubic feet (1974 data from Setzer and Throssell 1977).

PRIMARY WOOD PROCESSORS

Numbers of primary wood processing plants responding to the 1985 canvass were:

Sawmills	20
Papermill	1
Post and pole yard	2

TERMINOLOGY

Coarse residue—That part of sawmill or mill residue suitable for chipping, such as slabs, edgings, and trimmings.

Fine residue—That part of sawmill or mill residue that is finer than coarse residue and consists of sawdust and shavings.

Growing-stock removals (in this publication)—The growing-stock volume removed from inventory by harvesting. Consists of logging residue and the growing-stock volume of products.

Growing-stock trees (in this publication)—Live sawtimber trees and poletimber trees meeting specified standards of quality and vigor; excludes cull trees.

Growing-stock volume—Net cubic-foot volume in live poletimber-size and sawtimber-size growing-stock trees from a 1-foot stump to a minimum 4-inch top (of central stem) outside bark or to the point where the central stem breaks into limbs.

Industrial wood products—All timber products except fuelwood.

Logging residue—The unused growing-stock or sawtimber volume of trees cut or killed by logging and left in the woods.

Mill residue—Wood material from manufacturing plants not used for the mill's primary product. Includes bark, slabs, edgings, trimmings, miscuts, sawdust, and shavings.

Poletimber trees—Live trees of timber species at least 5 inches diameter at breast height (d.b.h.) but smaller than sawtimber size.

Removals (in this publication)—The growing-stock and sawtimber volume removed from the inventory by harvesting. Consists of logging residue and the growing-stock and sawtimber volume of products.

Sawlog portion—That part of the bole of sawtimber trees between a 1-foot stump and the sawlog top.

Sawlog top—The portion on the bole of sawtimber trees above which a sawlog cannot be produced. The minimum sawlog top is 7 inches diameter at outside bark (d.o.b.) for softwoods and 9 inches d.o.b. for hardwoods.

Sawtimber product volume—The sawtimber volume in timber products.

Sawtimber removals (in this publication)—The sawtimber volume removed from inventory by harvesting. Consists of logging residue and the sawtimber volume of products.

Sawtimber trees—Live trees of timber species meeting regional size and defect specifications. Softwood trees must be at least 9 inches d.b.h. and hardwood trees 11 inches d.b.h.

Sawtimber volume—Net volume in board feet of the sawlog portion of live sawtimber trees.

Timber production—The harvest of timber products. Also called industrial roundwood production or industrial wood production. Timber products or industrial roundwood (products) refer to logs, bolts, or other round sections cut from trees for industrial or consumer use and delivered "in the round" as logs or bolts to sawmills, plants, or yards. Timber products, in this report, do not include fuelwood. Included are sawlogs, pulpwood, utility poles, corral poles, and posts. Mine timbers, landscaping timbers, house logs, veneer logs, and excelsior bolts would be included had they been reported as harvested.

REFERENCES

- Setzer, Theodore S. 1971. Estimates of timber products and plant residues, Arizona, 1969. Res. Note INT-130. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station. 4 p.
- Setzer, Theodore S.; Throssell, Terrence S. 1977. Arizona timber production and mill residues, 1974. Res. Note INT-230. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station. 6 p.

FOREST SURVEY TABLES

Table 1--Cubic volume of timber products harvested in Arizona by species and product, 1984

Species	Product			All ² products
	Sawlogs	Pulpwood	Other ¹ products	
- - - - - <u>Thousand cubic feet</u> - - - - -				
True fir	1,394	136	--	1,530
Engelmann spruce	1,374	68	--	1,442
Ponderosa pine	50,769	6,698	185	57,652
Douglas-fir	2,658	208	--	2,866
Aspen	121	--	--	121
All species ²	56,316	7,110	185	63,611

¹Includes utility poles, corral poles, and posts.

²Data may not sum to totals due to truncating or rounding.

Table 2--Board foot volume of timber products harvested in Arizona by species and product, 1984

Species	Product			All ² products
	Sawlogs	Pulpwood	Other ¹ products	
<hr/>				
	<hr/> - - - - - Thousand board feet, Scribner rule - - - - -			
True fir	8,324	890	--	9,214
Engelmann spruce	8,222	445	--	8,667
Ponderosa pine	303,438	42,611	802	346,851
Douglas-fir	15,884	1,333	--	17,217
Aspen	722	--	--	722
<hr/>				
All species ²	336,593	45,279	802	382,674

¹Includes utility poles, corral poles, and posts.

²Data may not sum to totals due to truncating or rounding.

Table 3--Board foot volume of timber products harvested in Arizona by species and product, 1984

Species	Product			All ² products
	Sawlogs	Pulpwood	Other ¹ products	
<hr/>				
- - <u>Thousand board feet, International $\frac{1}{4}$-inch rule</u> - -				
True fir	9,022	964	--	9,986
Engelmann spruce	8,911	482	--	9,393
Ponderosa pine	328,922	46,193	869	375,984
Douglas-fir	17,218	1,447	--	18,665
Aspen	782	--	--	782
<hr/>				
All species ²	364,858	49,086	869	414,813

¹Includes utility poles, corral poles, and posts.

²Data may not sum to totals due to truncating or rounding.

Table 4--Cubic volume of timber products harvested in Arizona by owner and product, 1984

Owner	Product			All ² products
	Sawlogs	Pulpwood	Other ¹ products	
<hr/>				
	<hr/> <div>Thousand cubic feet</div> <hr/>			
National Forest	34,900	6,940	185	42,025
Private	21,399	28	--	21,427
State	17	142	--	159
<hr/>				
All owners ²	56,316	7,110	185	63,611

¹Includes utility poles, corral poles, and posts.

²Data may not sum to totals due to truncating or rounding.

Table 5--Board foot volume of timber products harvested in Arizona by owner and product, 1984

Owner	Product			All ² products
	Sawlogs	Pulpwood	Other ¹ products	
<hr/>				
	- - - - Thousand board feet, Scribner rule - - - -			
National Forest	208,599	44,186	802	253,587
Private	127,894	182	--	128,076
State	100	911	--	1,011
	<hr/>			
All owners ²	336,593	45,279	802	382,674

¹Includes utility poles, corral poles, and posts.

²Data may not sum to totals due to truncating or rounding.

Table 6--Board foot volume of timber products harvested in Arizona by owner and product, 1984

Owner	Product			All ² products
	Sawlogs	Pulpwood	Other ¹ products	
<hr/>				
- - <u>Thousand board feet, International $\frac{1}{4}$-inch rule</u> - -				
National Forest	226,114	47,899	869	274,882
Private	138,636	198	--	138,834
State	108	989	--	1,097
<hr/>				
All owners ²	364,858	49,086	869	414,813

¹Includes utility poles, corral poles, and posts.

²Data may not sum to totals due to truncating or rounding.

Table 7--Cubic volume of timber products harvested in Arizona by county and product, 1984

County	Product			All ² products
	Sawlogs	Pulpwood	Other ¹ products	
<hr/>				
	<hr/> Thousand cubic feet <hr/>			
Apache	28,424	77	155	28,656
Coconino	22,158	2,860	30	25,048
Gila	--	145	--	145
Graham	50	--	--	50
Greenlee	774	--	--	774
Navajo	4,739	3,840	--	8,579
Yavapai	171	188	--	359
<hr/>				
All counties ²	56,316	7,110	185	63,611

¹Includes utility poles, corral poles, and posts.

²Data may not sum to totals due to truncating or rounding.

Table 8--Board foot volume of timber products harvested in Arizona by county and product, 1984

County	Product			All ² products
	Sawlogs	Pulpwood	Other ¹ products	
<hr/>				
	- - - Thousand board feet, Scribner rule - - -			
Apache	169,886	489	753	171,128
Coconino	132,447	18,231	49	150,727
Gila	--	931	--	931
Graham	300	--	--	300
Greenlee	4,623	--	--	4,623
Navajo	28,311	24,434	--	52,745
Yavapai	1,026	1,194	--	2,220
	<hr/>			
All counties ²	336,593	45,279	802	382,674

¹Includes utility poles, corral poles, and posts.

²Data may not sum to totals due to truncating or rounding.

Table 9--Board foot volume of timber products harvested in Arizona by county and product, 1984

County	Product			All ² products
	Sawlogs	Pulpwood	Other ¹ products	
<hr/>				
- <u>Thousand board feet, International 1/4-inch rule</u> -				
Apache	184,154	529	816	185,499
Coconino	143,568	19,765	53	163,386
Gila	--	1,010	--	1,010
Graham	326	--	--	326
Greenlee	5,011	--	--	5,011
Navajo	30,688	26,489	--	57,177
Yavapai	1,111	1,293	--	2,404
<hr/>				
All counties ²	364,858	49,086	869	414,813

¹Includes utility poles, corral poles, and posts.

²Data may not sum to totals due to truncating or rounding.

Table 10--Cubic volume of timber products harvested in Arizona by county and species, 1984

County	Species					All ¹ species
	True fir	Engelmann spruce	Ponderosa pine	Douglas-fir	Aspen	
- - - - - Thousand cubic feet - - - - -						
Apache	1,000	1,122	24,405	2,064	65	28,656
Coconino	224	46	24,436	342	--	25,048
Gila	2	1	138	4	--	145
Graham	3	3	4	40	--	50
Greenlee	--	8	681	62	23	774
Navajo	299	261	7,634	352	33	8,579
Yavapai	2	1	354	2	--	359
All counties ¹	1,530	1,442	57,652	2,866	121	63,611

¹Data may not sum to totals due to truncating or rounding.

Table 11--Board foot volume of timber products harvested in Arizona by county and species, 1984

County	Species					All ¹ species
	True fir	Engelmann spruce	Ponderosa pine	Douglas-fir	Aspen	
- - - - - <u>Thousand board feet, Scribner rule</u> - - - - -						
Apache	5,969	6,721	145,720	12,333	385	171,128
Coconino	1,382	294	146,960	2,088	3	150,727
Gila	18	9	876	28	--	931
Graham	18	18	24	240	--	300
Greenlee	--	46	4,068	370	139	4,623
Navajo	1,819	1,575	47,009	2,147	195	52,745
Yavapai	8	4	2,194	11	--	2,220
All counties ¹	9,214	8,667	346,851	17,217	722	382,674

¹Data may not sum to totals due to truncating or rounding.

Table 12--Board foot volume of timber products harvested in Arizona by county and species, 1984

County	Species					All ¹ species
	True fir	Engelmann spruce	Ponderosa pine	Douglas-fir	Aspen	
<hr/>						
	- - - - - Thousand board feet, International $\frac{1}{4}$ -inch rule - - - - -					
Apache	6,465	7,285	157,959	13,368	418	185,499
Coconino	1,497	317	159,304	2,265	3	163,386
Gila	20	10	950	30	--	1,010
Graham	20	20	26	260	--	326
Greenlee	--	50	4,410	401	150	5,011
Navajo	1,972	1,707	50,958	2,329	211	57,177
Yavapai	8	4	2,377	12	--	2,404
<hr/>						
All counties ¹	9,986	9,393	375,984	18,665	782	414,813

¹Data may not sum to totals due to truncating or rounding.

Table 13--Cubic volume of timber products harvested in Arizona by county and owner, 1984

County	Owner			All ¹ owners
	National Forest	Private	State	
<hr/>				
	- - - - -	<u>Thousand cubic feet</u>	- - - - -	
Apache	10,990	17,666	--	28,656
Coconino	24,843	46	159	25,048
Gila	145	--	--	145
Graham	50	--	--	50
Greenlee	774	--	--	774
Navajo	4,867	3,712	--	8,579
Yavapai	356	3	--	359
	<hr/>			
All counties ¹	42,025	21,427	159	63,611

¹Data may not sum to totals due to truncating or rounding.

Table 14--Board foot volume of timber products harvested in Arizona by county and owner, 1984

County	Owner			All ¹ owners
	National Forest	Private	State	
- - - - Thousand board feet, Scribner rule - - - -				
Apache	65,534	105,594	--	171,128
Coconino	149,425	291	1,011	150,727
Gila	931	--	--	931
Graham	300	--	--	300
Greenlee	4,623	--	--	4,623
Navajo	30,569	22,176	--	52,745
Yavapai	2,205	15	--	2,220
All counties ¹	253,587	128,076	1,011	382,674

¹Data may not sum to totals due to truncating or rounding.

Table 15--Board foot volume of timber products harvested in Arizona by county and owner, 1984

County	Owner			All ¹ owners
	National Forest	Private	State	
<hr/>				
- <u>Thousand board feet, International $\frac{1}{4}$-inch rule</u> -				
Apache	71,035	114,464	--	185,499
Coconino	161,973	316	1,097	163,386
Gila	1,010	--	--	1,010
Graham	326	--	--	326
Greenlee	5,011	--	--	5,011
Navajo	33,139	24,038	--	57,177
Yavapai	2,388	16	--	2,404
<hr/>				
All counties ¹	274,882	138,834	1,097	414,813

¹Data may not sum to totals due to truncating or rounding.

Table 16--Cubic volume of timber products harvested in Arizona by species and owner, 1984

Species	Owner			All ¹ owners
	National Forest	Private	State	
<hr/>				
	<hr/> Thousand cubic feet <hr/>			
True fir	413	1,115	2	1,530
Engelmann spruce	324	1,117	1	1,442
Ponderosa pine	39,426	18,074	152	57,652
Douglas-fir	1,747	1,115	4	2,866
Aspen	115	6	--	121
<hr/>				
All species ¹	42,025	21,427	159	63,611

¹Data may not sum to totals due to truncating or rounding.

Table 17--Board foot volume of timber products harvested in Arizona by species and owner, 1984

Species	Owner			All ¹ owners
	National Forest	Private	State	
<hr/>				
	<hr/> - - - Thousand board feet, Scribner rule - - -			
True fir	2,529	6,667	18	9,214
Engelmann spruce	1,970	6,688	9	8,667
Ponderosa pine	237,870	108,024	957	346,851
Douglas-fir	10,532	6,658	27	17,217
Aspen	686	36	--	722
	<hr/>			
All species ¹	253,587	128,076	1,011	382,674

¹Data may not sum to totals due to truncating or rounding.

Table 18--Board foot volume of timber products harvested in Arizona by species and owner, 1984

Species	Owner			All ¹ owners
	National Forest	Private	State	
<hr/>				
- Thousand board feet, International 1/4-inch rule -				
True fir	2,740	7,226	20	9,986
Engelmann spruce	2,135	7,248	10	9,393
Ponderosa pine	257,849	117,098	1,037	375,984
Douglas-fir	11,416	7,219	30	18,665
Aspen	742	40	--	782
<hr/>				
All species ¹	274,882	138,834	1,097	414,813

¹Data may not sum to totals due to truncating or rounding.

Table 19--Estimated volume of used and unused residue from mills in Arizona, 1984

Residue	Used			Total used	Total unused	Total used and unused
	Product					
	Pulp and boards	Fuel	Other			
- - - - - <u>Thousand cubic feet</u> - - - - -						
Bark	--	2,854	9,561	12,415	377	12,793
Coarse ¹	12,970	3,692	345	17,007	638	17,645
Fines ²	2,098	11,320	5,002	18,420	1,056	19,476
Total	15,068	17,866	14,908	47,842	2,071	49,914

Residue	Used			Total used	Total unused	Total used and unused
	Product					
	Pulp and boards	Fuel	Other			
	----- Bone dry units -----					
Bark	--	28,545	95,613	124,158	3,774	127,932
Coarse ¹	129,699	36,916	3,448	170,063	6,376	176,439
Fines ²	20,981	113,203	50,016	184,200	10,561	194,761
Total	150,680	178,664	149,077	478,421	20,711	499,132

¹Material suitable for chipping, such as slabs, edgings, and trim.

²Sawdust and planer shavings.

Table 20--Cubic volume of timber products harvested in Arizona by size of mill, plant, or yard receiving products, 1984

Mill capacity	Production
Million board feet, lumber tally	Million cubic feet
More than 10	58.8
5.1 - 10	3.4
1.1 - 5	.9
1 or less	.6
Total	63.6

APPENDIX I: CONVERSION FACTORS

Table 21--Conversion factors used in preparing volume figures for this report

Product	Cords	Cubic feet	Board feet	
			Scribner rule	International ¼-inch rule
Sawlogs ¹	--	1.0	5.977	6.479
Pulpwood ²	1	78.6	500.000	542.000
Pulpwood	--	1.0	6.350	6.883
Utility poles ³	--	1.0	4.867	5.276
Posts ⁴	--	1.0	0.000	0.000

Mill residues

BDU's⁵ of mill residue per Mbf (Scribner)⁶ of sawlogs

Coarse	0.62
Sawdust	0.33
Planer shavings	0.29
Bark	0.30

¹From timber utilization data collected on active logging operations in Arizona in 1985.

²Standard conversion for Arizona from Forest Service, U.S. Department of Agriculture.

³From mill canvass data, converted to cubic feet and board feet based on reported dimensions.

⁴Posts and corral poles with small end diameters less than 6 inches have zero board feet.

⁵Bone dry unit; 1 BDU = 2,400 lb = 100 cubic feet = 1.2 tons.

⁶Thousand board feet, Scribner rule.

APPENDIX II: ARIZONA DIRECTORY OF PRIMARY WOOD PROCESSORS

County	Name and mill location	Type of plant	County	Name and mill location	Type of plant
Apache	Eager Lumber Stone Container Corp. P.O. Box 408 Eager, AZ 82925 602-333-2029	Sawmill	Navajo	Duke City Lumber Co., Inc. P.O. Drawer W Winslow, AZ 86047 602-289-4655 John B. Smith, Forester	Sawmill
Apache	Ewart Lee 201 Relation St. Safford, AZ 85546 602-428-0044 Mill location: Nutrioso	Sawmill	Navajo	Ft. Apache Timber Co. P.O. Box 1098 Whiteriver, AZ 85941 602-338-4304	Sawmill
Apache	Reidhead Brothers Lumber Mill, Inc. Box 84 Nutrioso, AZ 85932 602-339-4542 Terry Reidhead, President	Sawmill	Navajo	North Star Lumber P.O. Box 1186 Pinedale, AZ 85934 602-739-4457 Jerry Brewer, Owner	Sawmill
Coconino	Arizona Forest Products Rural Route 3 Box 240 Flagstaff, AZ 86001 602-526-2019 Lee Collins, Owner	Sawmill	Navajo	Parker Lumber, Inc. Box 393 Clay Springs, AZ 85923 602-739-4461 Bill Parker, Owner	Sawmill
Coconino	Flagstaff Lumber Stone Container Corp. 825 E. Butler Flagstaff, AZ 86001 602-774-4511	Sawmill	Navajo	Precision Pine, Inc. P.O. Box 70 Heber, AZ 85928	Sawmill
Coconino	Fredonia Sawmill Kaibab Forest Products Co. P.O. Box 218 Fredonia, AZ 86022 602-643-7361	Sawmill	Navajo	Quality Industries Box 1176 Pinedale, AZ 85934 602-739-4273 Foch Peterson, Owner	Sawmill
Coconino	Grand Canyon Forest Industries P.O. Box 726 Williams, AZ 86046	Sawmill	Navajo	Reidhead Lumber Co., Inc. P.O. Box 189 Showlow, AZ 85901 602-537-4933 Shirley Reidhead, Treasurer	Sawmill
Coconino	John Ryberg P.O. Box 6 Parks, AZ 86018 602-774-7317 ext. 373	Sawmill	Navajo	Snowflake Papermill Stone Container Corporation P.O. Box 128 Snowflake, AZ 85937 602-774-4511	Papermill
Coconino	Two Mules Logging Co. 1768 E. Santa Fe Flagstaff, AZ 86002 602-779-3604 or 3602 602-774-2211 John Avery, Owner	Sawmill	Yavapai	Bunker Sawmill 1455 Sundog Ranch Road Prescott, AZ 86301 602-445-2374 Keith Bunker, Jr., President	Sawmill
Gila	Payson Sawmill P.O. Box D Payson, AZ 85541 602-474-4563	Sawmill	Yavapai	Chino Forest Products P.O. Box 1129 Chino Valley, AZ 86323 602-776-1660 Plant location: Del Rio Springs	Pole Yard
Graham	Dankworth Sawmill P.O. Box 1467 Safford, AZ 85546 602-428-1888 George Dankworth, Owner	Sawmill	Yavapai	Dick Rhodes Sawmill Box 463 Crown King, AZ 86343 602-632-7911 Dick Rhodes, Owner	Sawmill
			Yavapai	Merritt Lumber Co. P.O. Box 421 Ash Fork, AZ 86320	Sawmill

McLain, William H. 1988. Arizona's timber production and mill residue, 1984. Resour. Bull. INT-55. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station. 16 p.

Reports 1984 timber production estimates for Arizona by county, species, owner, and product. Also reports mill residue estimates by use. Data obtained by canvassing primary wood processors in Arizona and out-of-State mills receiving logs harvested in Arizona.

KEYWORDS: timber products output, industrial roundwood, primary wood products

INTERMOUNTAIN RESEARCH STATION

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